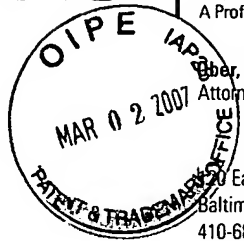


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Alexandria, VA 22313-1450

Re: New U.S. Patent Application 10/821,693 for "COMBINATION DENTAL MIRROR AND MEASURING GAUGE"; From (Provisional Patent Application 60/461,582; Filed: April 8, 2003); Filed: April 13, 2004; Applicant: Howard Martin.

Dear Sir:

Enclosed, please find the following:

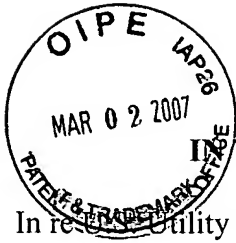
1. Three (3) copies of Supplemental Appeal Brief; Inclusive of Appendix A: Claims Under Appeal, Appendix B: Evidence, Appendix C: Related Proceedings (Filed in triplicate).
2. Our post card. Please date stamp and return.

Please charge any fees to our Deposit Account 50-3391 (a duplicate copy of this charge authorization is attached.) Thank you for your cooperation and assistance.

Respectfully submitted,

Royal W. Craig
Reg. 34,145

I HEREBY CERTIFY that on March 2, 2007, one copy of the above-referenced documents were transmitted by Express Mail to the United States Patent and Trademark Office.



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Utility Patent Application of

MARTIN, Howard

Art Unit: 3732

Appln. No. 10/821,693

Examiner: Casey Donahoe

Filed: 10 April 2004

For: COMBINATION DENTAL MIRROR AND MEASURING GAUGE

* * *

SUPPLEMENTAL APPEAL BRIEF

To The Honorable Commissioner
of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

This Supplemental Appeal Brief is filed in response to the Advisory Action dated 16 February 2007, and further to the Appeal from the final rejection of pending claims 1, 3, 5, 7, 8, 11-12, and 15 of the subject application. No claims stand allowed.

REAL PARTY IN INTEREST

The real party in interest is the inventor, Howard Martin.

RELATED APPEAL PROCEEDINGS

None

STATUS OF CLAIMS

Claims 1, 3, 5, 7, 8, 10-12, and 15 are pending in the application, and all of claims 1, 3, 5,

7, 8, 10-12, and 15 stand rejected. The rejection of all claims 1, 3, 5, 7, 8, 11-12, and 15 is appealed. Please see Appendix A for a copy of these claims under Appeal.

STATUS OF AMENDMENTS

On 8 September 2006 Appellants filed a Rue 116 Amendment that was not entered (by Advisory Action dated 4 October 2006), and so the status of the claims are as amended per Appellant's previous Amendment filed 13 March 2006. Also on 8 September 2006, Appellant filed Request for Reconsideration of Finality in the above-identified case, contesting the Examiner's decision to make the Official Action final. Appellant maintains that it was improper to make this last Official Action final inasmuch as entirely new prior art references were applied, forming entirely new grounds for rejection of all pending claims, and these new rejections were not necessitated by Applicant's amendment (as stated more specifically in the Request for Reconsideration). Appellant should be entitled to a full and fair opportunity to address the new references as applied, and no decision or feedback was received on the Request for Reconsideration of Finality.

SUMMARY OF CLAIMED SUBJECT MATTER

With reference to the published application no. 20050227198, the present invention a multi purpose dental tool combining a dental mirror with a particular measurement gauge for use in conjunction with an existing root canal file during a root canal procedure. [page 2, para 0017]. The present device is intended to assist in measuring the proper insertion depth of the root canal file into the drilled access cavity of a tooth. It is common for oral surgeons to place a small rubber O-ring on the tip of their file, and to insert the file into the access cavity. [page 1, para

0007] The surface of the tooth urges the rubber ring backwards along the file as the file is inserted. Once the file is fully inserted, it is withdrawn and the distance traveled by the rubber stopper from the tip of the file is measured to determine the depth to which the root canal is penetrated. This procedure traditionally required a separate dental mirror, root canal file, measuring gauge, and O-ring. The measurement was difficult because the flat measuring gauge had to be held in place against the cylindrical root canal file. This is an inherently unstable match and typically required two hands. Moreover, after the measurement it was necessary to autoclave three instruments (dental mirror, root canal file and measuring gauge), and discard the O-ring.

The present invention combines the mirror and measurement gauge into one single-handed instrument, reduces the number of instruments to autoclave to two, and greatly facilitates the measurement procedure with a measurement gauge that seats the file in the gauge in docking engagement to stabilize the measurement.

With particular regard to independent claims 1 and 12, the multi-purpose dental tool includes a shaft (5), preferably rounded in cross-section, with an angled dental mirror (6) mounted at one end. [page 2, para 025 and FIG. 1]. The opposite end of the shaft is defined by a flat end surface (23) perpendicular to the length of the shaft and having a semi-circular groove (7) journaled into the flat end surface, running along the side of the shaft for a distance of approximately thirty millimeters, and opening outward from the end of the shaft. [page 2, para 026 and FIG. 1]. The groove is of a shape and size to receive and secure the end of a root canal file. Measuring lines (8) in millimeters are marked along the length of the groove. [page 2, para 026 and FIG. 1]

In use, a root canal file with an attached rubber stopper (indicating the depth of the apical

foramen) is placed within the groove such that the rubber stopper abuts the flat end of the shaft. The length of the file from the flat end of the shaft to its end point within the groove can easily be measured by observing the provided markings. [page 2, para 029 and FIGs. 2-3].

The entire device including the handle, mirror and measuring gauge are integrally formed from autoclavable and chemoclavable materials (fiberglass, plastic, ABS plastic, glass filled resin, stainless steel, nickel chrome steel, or polymers) and there are no grooves, locking mechanisms, threads or serration, or clips to harbor debris. Thus the device is easy to clean, thereby reducing the risk of infection and conforming to all applicable requirements of the World Health Organization, CDC, and OSAP (Organization for Sterilization and Asepsis Procedures-Dental) for dental instruments. Moreover, the device is lightweight and can be single-handedly manipulated.

The above constitutes a concise explanation of the invention as defined in independent claims 5 and 12 involved in the Appeal.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following is a concise statement of each ground of rejection presented for review. There are five categorical ground of rejection as set forth as follows:

1st: Whether claims 1, 3, 7, and 12 are unpatentable under 35 U.S.C. 103(a) as being obvious over Petty et al. (US 4,252,522) in view of Johnsen et al. (US 6,036,490)?

2nd: Whether Claim 5 is unpatentable under 35 U.S.C. 103(a) as being obvious over Petty et al. in view of Johnsen et al. (above) and Frider et al. (U.S. 6,932,601)?

3rd: Whether Claims 8 and 15 are unpatentable under 35 U.S.C. 103(a) as being obvious over Petty et al. in view of Johnsen et al. (above) and further in view of Vice (U.S. 4,028,810)?

4th: Whether claim 11 is unpatentable under 35 U.S.C. 103(a) as being obvious over Petty et al. in view of Johnsen et al. as above, and further in view of Berk et al. (U.S. 6,595,775)?

GROUPING OF CLAIMS

The claims include three groups of claims: 1) 1, 3, 5, 7 and 12; 2) 8, 15; and 3) 11.

The appellant hereby states that all rejected claims within each group stand and fall together.

ARGUMENT

1st: The Examiner errs in rejecting claims 1, 3, 7, and 12 as unpatentable under 35 U.S.C. 103(a) for obviousness over Petty et al. (US 4,252,522) in view of Johnsen et al. (US 6,036,490).

According to the Examiner, Petty et al. disclose a multi-purpose dental tool, including a mirror attached to one end, an open-faced groove opening distally into the second end of the shaft and extending therefrom, and measuring lines equally spaced along the shaft proximate the channel. The Examiner considers that Petty et al. fail to disclose a semi-circular groove with cross-section adapted to conform to and receive a root canal file and secure it therein. In the Examiner's view Johnsen et al. disclose a semi-circular groove or channel (42) for receiving and securing the file, and one skilled in the art would consider it obvious to use the semi-circular groove of Johnsen et al. in the device of Petty et al. The Examiner errs in crediting Petty et al. with "an open-faced groove opening distally into the second end of the shaft and extending therefrom". The relevant claims require a channel formed integrally in the second end of the handle shaft and defined by an open-faced groove. Petty et al. show the flat channel but no such

groove cut into the channel. The relevant definition (1) of "Groove" is "A long narrow channel cut into the surface of a hard material". Oxford American Dictionary, 1980. Petty et al. has no groove formed within a channel and therefore fails a primary purpose of the present invention: to seat the file in the groove in order to stabilize the measurement. Moreover, Petty et al. does not teach or suggest the groove "opening distally into the second end of the shaft and extending therefrom". This feature is essential for the rubber-O-ring measurement technique of the present invention where it is necessary to insert the file lengthwise into the groove until the O-ring abuts the surrounding end of the device. Petty et al. have no groove opening outward from the distal end. Johnsen et al. discloses an endodontic file servicing system having a trough 42 for receipt of endodontic files, and a scale etched proximate the trough 42. The Examiner acknowledges that Johnsen et al. do not explicitly state the reasoning behind the shape of their groove, but takes Official Notice that a semicircular shape constitutes an obvious choice for a groove to securely hold a file. Thus the Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the "groove" disclosed by Petty et al. with a semi-circular cross section, to "securely secure an endodontic file and allow the user to remove his hand."

First of all the Johnsen et al. device is designed to occupy one hand (the file in the other) and this entirely negates a main purpose of the present device, namely to provide a lightweight unitary device that can be single-handedly manipulated. Moreover, the Johnsen et al. device is a multi-component device with many parts, not formed of unitary autoclavable and chemoclavable materials, and it cannot be thrown into an autoclave for sterilization. There is nothing in the Johnsen et al reference to teach or suggest incorporating the semi-circular measurement groove directly into the handle of a mirror-gauge combination, nor anything in Petty et al. to suggest the

converse. Consequently, it would not be obvious to one skilled in the art to endeavor to make the cited combination to begin with.

Even if the combination, though improper, were made it still fails to suggest “*a handle formed as an elongate shaft...a channel formed integrally in the...end of the handle shaft and defined by an open-faced groove having a semi-circular cross-section and diameter of approximately 1.0 mm adapted to conform to and receive said existing root canal file inserted lengthwise therein, said groove opening distally into the second end of said shaft and extending open-faced from the second end along a length of said handle for receiving said existing root canal file during said lengthwise insertion ..[to] positions and secures said file therein...said measuring lines provide a visual indication of an offset of said stopper to a tip of said root canal file.*” These are essential limitations of claim 1 and claim 1 is patentably distinguished.

Claims 3 and 7 depend from claim 1 and are likewise distinguished.

Claim 12 includes the limitations of claim 1 and is further distinguished inasmuch as it requires “*a shaft having an open-faced channel, for receiving a portion of a root canal file, running approximately thirty millimeters along its length and opening to one end of said shaft, said open-faced channel having a width, and depth, and cross-section adapted to conform to and seat said root canal file when inserted lengthwise therein, of sufficient dimensions to freely receive a root canal file and to allow for a said root canal file to freely slide along the length of the channel*”. Consequently, claim 12 is patentably distinguished on the basis of these additional dimensional and supporting functional limitations.

2nd: The Examiner errs in rejecting claim 5 as unpatentable under 35 U.S.C. 103(a) for obviousness over Petty et al. in view of Johnsen et al. (above) and Frider et al. (U.S. 6,932,601).

Claim 5 depends on claim 1 and incorporates the same above-described patentable limitations. Claim 5 also specifies a circular mirror having an approximate 22 24 mm diameter and mounted on said elongated shaft at an angle of approximately 45 degrees. The Examiner credits Frider et al. with disclosing a circular mirror of the recited dimensions at a 45 degree contra angle. While the mirror details may be shown, the cited combination lacks the essential limitations at the other end of the device because, as stated above in regard to claim 1 and 12, neither Petty et al. nor Johnsen et al. suggest a groove formed within a channel, nor any groove “opening distally into the second end of the shaft and extending therefrom”. These features are essential for the rubber-O-ring measurement technique and so claim 5 is patentably distinguished for the same above-described reasons as claims 1 and 12.

3rd: The Examiner errs in rejecting claims 8 and 15 as unpatentable under 35 U.S.C. 103(a) for obviousness over Petty et al. in view of Johnsen et al. (above) and further in view of Vice (U.S. 4,028,810).

Claims 8 and 15 depend on claims 1 and 12, respectively, and further limit the groove to its semi-circular shape with a diameter (or width) of approximately 1.0 mm and a radius (or depth) of approximately .5 mm. Again, the cited combination lacks the essential limitations of “a groove formed within a channel”, nor any groove “opening distally into the second end of the shaft and extending therefrom”. These features are essential for the rubber-O-ring measurement technique and so claim 8 and 15 are patentably distinguished for the same above-described

reasons as claims 1 and 12. Moreover, as noted by the Examiner, neither Petty et al. nor Johnsen et al. explicitly disclose the dimensions of the groove. Vice merely discloses that the diameter of a root canal file may fall between 0.75 and 1.0 mm, but does not suggest a groove to receive and seat it. It is inherent in the limitations of claims 8 and 15 that the groove fully enclose the entire bottom half of the file in order to securely seat it. Appellant has clearly stated the advantage in these dimensions (they must seat and secure the file), and so the dimensions do not fall within a range of obvious values. None of the cited combination teaches or suggest the advantage or the dimensions to accomplish it. Therefore, it would not have been obvious to one of ordinary skill in the art at the time of the invention to construct the groove disclosed by Johnsen et al. with a width of approximately 1.0 mm or depth of .5 mm to “seat and secure” (not merely accommodate) the root canal file.

4th: The Examiner errs in rejecting claim 11 as unpatentable under 35 U.S.C. 103(a) for obviousness over Petty et al. in view of Johnsen et al. as above, and further in view of Berk et al. (U.S. 6,595,775).

Claim 11 reflects a primary advantage of the present device: to be able to sanitize (by autoclaving) the entire instrument. Thus, claim 11 requires the shaft, handle and measuring device to be integrally formed from an autoclavable and chemiclavable material consisting of one from among the group of fiberglass, plastic, ABS plastic, glass filled resin, stainless steel, nickel chrome steel, and polymers. Neither Petty et al. nor Johnsen et al. suggest any particular material, and the latter is formed of many different components and clearly is not autoclavable. Nevertheless, the Examiner looks to Berk et al. to show dental mirrors of stainless steel or plastic (column 4, lines 38-40). While this may be true, Berk et al. shows only a dental mirror and not a

combination mirror and measurement gauge formed as one single-handed instrument, all fully autoclavable as a unit. Since the tripartite combination suggested by the Examiner would result in a hodge-podge of parts it would not have been obvious to one of ordinary skill at the time of the invention to form the device disclosed by Petty et al with the groove of Johnsen et al. of either plastic or stainless steel as taught by Berk et al. The Examiner is effectively making a piecemeal reconstruction of the presently claimed device, but the goals and advantages are nowhere taught, pursued or inherent in the references. Consequently, there is no suggestion/motivation, and piecemeal reconstruction is inappropriate. *See In Re Kotzab*, 217 F.3d 1365-69, 55 USPQ2d 1313-1316 (Fed. Cir. 2000). Claim 11 is patentably distinguished.

* * * * *

For the reasons set forth herein, it is believed that the Examiner erred and that this application clearly and patentably distinguishes over the prior art and is in proper condition for allowance. Reversal is respectfully requested.

Respectfully submitted,

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APPENDIX A: CLAIMS APPENDIX

1. A multi-purpose dental tool, comprising:
 - a handle formed as an elongate shaft having an operative first end and a second end;
 - a dental mirror integrally attached to the operative first end of said handle shaft; and
 - a measuring device comprising a channel formed integrally in said the second end of the handle shaft and defined by an open-faced groove having a semi-circular cross-section adapted to conform to and receive an existing root canal file inserted lengthwise therein, said groove opening distally into the second end of said shaft and opening extending open-faced from to the second end along a length of said handle , and measuring lines equally-spaced along said shaft proximate said channel for demarcating an extent of said channel relative to said second end; where by said open-faced groove positions and secures said file therein, and said measuring lines provide a visual indication of an extent to which a root canal file is inserted therein .
3. The multi-purpose dental tool of claim 1, wherein said measuring lines are marked in millimeters with major intervals marked at every 5 millimeters.
5. The multi-purpose tool of claim 1, wherein said dental mirror is circular mirror having an approximate 22-24 mm diameter and mounted on said elongated shaft at an angle of approximately 45 degrees.
7. The multi-purpose dental tool of claim 1, wherein said groove extends into the second end of said shaft approximately 30 mm lengthwise along said shaft adjacent said measuring lines, for receiving and measuring said root canal file.
8. The multi-purpose dental tool of claim 7, wherein said groove is semi-circular in shape with a diameter of approximately 1.0 mm and a radius of approximately .5 mm.
10. The multi-purpose dental tool of claim 7, wherein said internal channel is cylindrical in shape having a diameter of approximately 1.0 mm.
11. The multi-purpose dental tool of claim 3, wherein said shaft is handle and measuring device are integrally formed from an autoclavable and chemiclavable material consisting of one from among the group of fiberglass, plastic, ABS plastic, glass filled resin, stainless steel, nickel chrome steel, and polymers.
12. A dental instrument for measuring a distance, comprising:
 - a shaft having a n open-faced channel, for receiving a portion of a root canal file, running approximately thirty millimeters along its length and opening to an one end of said shaft, said open-faced channel having a width, and depth, and cross-section adapted to conform to and seat said root canal file when inserted lengthwise therein, of sufficient dimensions to freely receive a root canal file and to allow for a said root canal file to freely slide along the length of the channel;
 - a dental mirror integrally attached to another end of said shaft; and
 - measuring lines marked on a top surface of said shaft along the length of said channel and adjacent to said channel for providing a visual indication of an extent to which said root canal

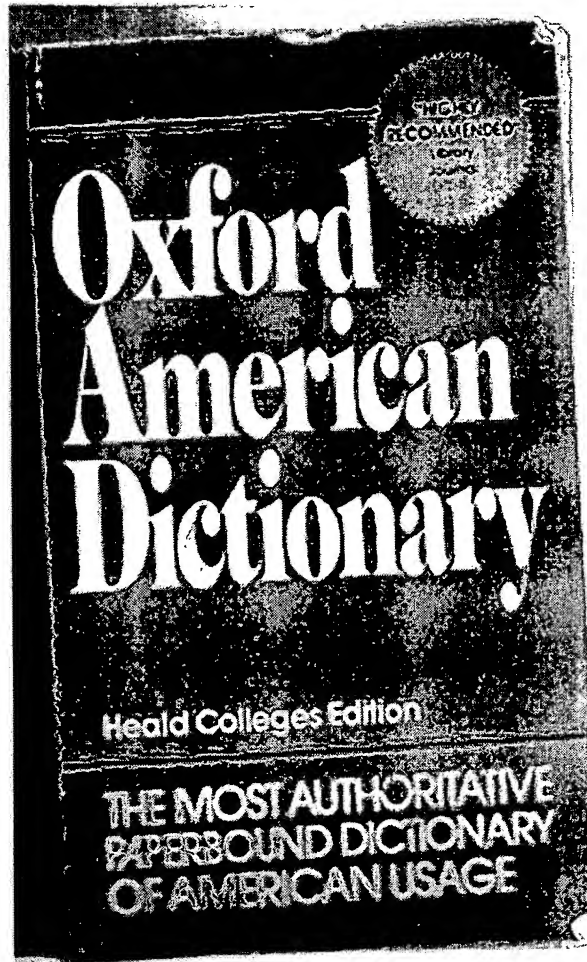
file is inserted into said channel relative to the open end of said shaft;

whereby said open-faced channel positions and secures said file therein, and said measuring lines provide a visual indication of an extent to which said root canal file is inserted therein .

15. The dental instrument of claim 12, wherein the channel is approximately 1.0 millimeter in width and approximately 0.5 millimeters in depth.

APPENDIX B: EVIDENCE APPENDIX

The definition of "Groove" from Oxford American Dictionary, 1980.



groom·ing (groo·ming) *n.* personal cleanliness and neatness, *good grooming*.
groove (groov) *n.* 1. a long narrow channel in the surface of hard material. 2. a spiral cut on a phonograph record for the needle or stylus. 3. a way of living that has become a habit. **groove** *v.* (**grooved**, **groov·ing**) 1. to make grooves in. 2. (*slang*) to enjoy, to approve of. ☐ **In the groove**, (*slang*) in top form.
groov·y (groo·vee) *adj.* (**groov·i·er**, **groov·i·est**) (*slang*) excellent, admired.
..... (*slang*) .. (*grooved*, **groov·ing**) 1.

APPENDIX C: RELATED PROCEEDINGS APPENDIX

NONE